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ABSTRACT

The purpose of this study was to find out which environmental characteristics influence student satisfaction and which can be altered or affected by architectural design. A questionnaire was designed which measured overall student satisfaction, as well as satisfaction with 25 specific environmental variables. The object was to evaluate the need for various architectural features in residence hall design by ccmparing satisfaction with the individual architectural feature with overall satisfaction with the total living environment. Nine hundred and fifty students living in 43 residence halls on 8 campuses completed the questionnaire. The results indicated that student satisfactien or dissatisfaction with a particular architectural variable did not affect overall satisfaction with the total housing environment appreciably. The best predictor cf overall student satisfaction was residence hall type, with students who do not consider their residence hall tc be a dormitcry the most satisfied. (Author/AF)

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ARCHITECTURAL DETERMINANTS OF STUDENT SATISFACTION IN COLLEGE RESIDENCE HALLS

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January 29, 1971

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SUMMARY

This is a study of the relationships between the architecture of college residence halls and satisfaction of students living in them. We wanted to find out about those environmental characteristics which influence student satisfaction and which can be altered or affected by architectural design.

A questionnaire was designed which measured overall student satisfaction, as well as satisfaction with 25 specific environmental variables. The object was to evaluate the need for various architectural features in residence hall design by comparing satisfaction with the individual architectural feature with overall satisfaction with the total living environment. Additional data gathered permitted control for the effects of non-architectural variables which might have intervened to modify overall satisfaction. The questionnaire was completed by 950 students living in 43 residence halls on eight campuses. Several different types of residence halls were sampled: conventional dorms, apartments, suites and irregular or unconventionally designed residence halls.

The results indicated that student satisfaction or dissatisfaction with a particular architectural variable did not affect overall satisfaction with the total housing environment appreciably. The architectural variables did correlate with student satisfaction, but the correlations were mild and the range of differences between correlations was small. Therefore, the architectural variables could not be rank ordered according to their relative importance to student satisfaction. No one architectural variable or group of variables stood out as being a principal cause of overall student satisfaction or dissatisfaction with their housing.

These findings do not demonstrate, however, that architectural factors have no effect on student satisfaction. They do indicate that if an architect tries to eliminate student gripes and complaints about specific architectural features, he may not be addressing the real architectural factors which cause the dissatisfaction.

The best predictor of overall student satisfaction turned out to be residence hall types. Only nine percent of the students living in conventional dorms were highly satisfied overall compared to forty-eight percent living at the University of Guelph housing complex which was considered unconventional by its student residents. It seems that students who do not consider their residence hall to be really a dormitory at all are the most satisfied. The overall impression that a student has of his housing is more important than his satisfaction with the individual environmental characteristics. It is what the building symbolizes to him that is the deciding factor, not the specific detailed parts of his living experience which he objects to or complains about.

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INTRODUCTION

The administrators of the University of California, San Diego, were interested in establishing design criteria for the construction of college housing which would effectively meet student needs. This study was undertaken to gather information about the relationship of the architectural features of residence halls to student satisfaction.

Previous literature, research and design of student housing is based on the assumption that students will be generally satisfied with the housing their institution provides for them if the buildings are designed to meet their needs for privacy, quiet, control of temperature, and a number of other architectural qualities. If that paradigm is true, the problem for the architect in designing a residence hall is to allocate his construction budget so as to achieve a good balance between spending for increased room size, for acoustical installation, for making it possible for the student to personalize his room, and for a host of other features. This study was designed to measure various aspects of this paradigm and to test its validity.

The progress of this research can be divided into three phases:

1) A preliminary investigation into the nature and scope of the problem which was conducted by TEAG--The Environmental Analysis Group and a separate academic investigation undertaken by Gerald Davis while teaching at Stanford University.

2) A pilot study in which Mary Avery and Gerald Davis conducted a series of focused group interviews and observed at a number of campuses across the United States. Gerald Davis prepared a report analyzing the preliminary findings with the participation of Charles Weesner as Project Manager for TEAG.

3) The research project on which this report is based developed out of the knowledge gained in phases one and two, and from a series of working sessions with George Murphy, the Vice Chancellor and Executive Dean of Students at UCSD; Alan Batchelder, Dean of Students at John Muir College; Mary Avery; and members of staff at TEAG--The Environmental Analysis Group. A number of other experts, including Harold Riker, were also consulted. The object of the study was to determine if student satisfaction with the individual architectural features affected overall satisfaction with the living environment. We wanted to measure student needs as they relate to building design and to determine, if possible, a set of priorities which architects designing college residence halls should take into consideration.

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METHODS AND PROCEDURES

In measuring people's responses to their living environment, there are three sets of variables we need to deal with. First we must identify and measure the aspects of the architecture that we want to study. Then we must measure the responses of the users of the architectural environment. And finally, we must control the unwanted variables, in this case, the non-architectural aspects of college living.

We used a survey research approach to determine the relationship between the architecture of college residence halls and the satisfaction of students living in them. An individual's response to his environment is very subjective. We wanted, therefore, to examine the opinions of a large number of students to find out what general agreement there was about what people did and did not like about residence hall living. By using a standard set of questions, we were able to measure the student's response to the architectural environment, and to manipulate, test and control a set of environmental variables.

Our method did impose comparability upon the sample where, in some cases, it did not otherwise exist. The comparability of responses, however, was essential to our observing the mechanics of student satisfaction. We did not want to end up with an array of anecdotes from each sample residence hall. We believe this information would have been only marginally useful to people involved in providing student housing.

Our sample consisted of 43 housing units on eight campuses in the United States and in Canada, selected to provide a range of environmental conditions. The individual students to be questioned were selected at random from lists of the residents of the sample dorms. Approximately 70 percent (950) of the students selected actually completed usable questionnaires.

To compare and measure the differences between buildings, we had to identify and select specific attributes of the buildings for study. We could not cope with the potentially infinite range of similarities/ differences among buildings, for only some limited number of aspects are, in fact, really of interest. We wanted to study those characteristics of a college housing unit which can be affected by architectural design decisions. We subdivided these characteristics into large scale and small scale differences in the environment. A variety of representative types (based on differences in size, design, sponsorship and type of student) of campuses and residence halls were surveyed. Included were new and interesting design approaches to the problems of student housing. We wanted to vary the sampled environments as much as possible and look for the consequences in terms of student satisfaction. The large scale differences were differences in overall residence design. The sample, therefore, consisted of a variety of housing units on eight campuses which were grouped into five basic types of residence halls:

conventional long-corridor dormitories,suites, apartments, and two housing complexes, one at St. Olaf and one at Guelph, which could at best be termed irregular. A brief description of each type follows:

University at Guelph, Housing Complex B (Called Residence Hall Type A)

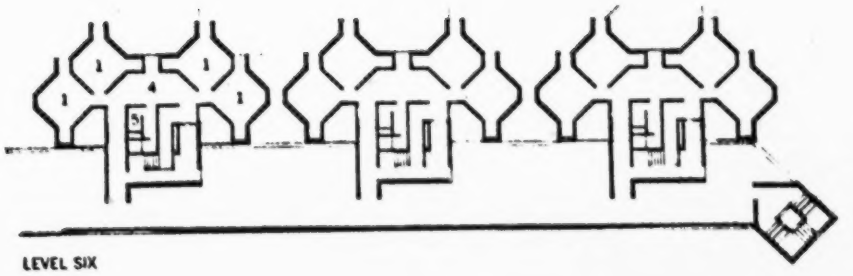
Complex B at Guelph is an innovative residence hall design. It houses 1662 men and women students, approximately 70 percent in single rooms and 30 percent in doubles. The study-bedrooms, lounges, dining halls, and social spaces are distributed along an interior pedestrian street which serves as the spine of the grid patterned scheme. The basis for the design is the grouping of four single rooms and a double into a defined unit around a landing and sharing a washroom. Two of these groups combine vertically to share a lounge and kitchenette one half level between each group of bedrooms. Additional bedrooms, originally intended as work spaces for non-resident students, are located along secondary corridors. Each of the resulting towers of four to six students per floor is six stories high. The towers are grouped in threes along one side of the V-shaped connecting structure. The six floors of bedrooms and activity spaces within the V-shaped unit make one residence. Each residence is entered through an enclosed bridge from a dining hall and common room complex. The dining and common rooms are for the use of residents and non-residents alike. (See diagram on next page.)

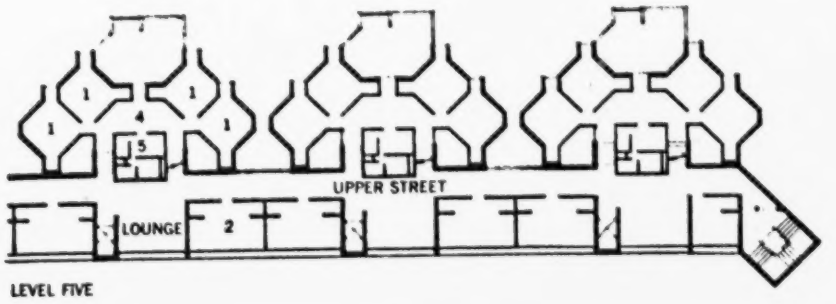
Apartments (Called Residence Hall Type B)

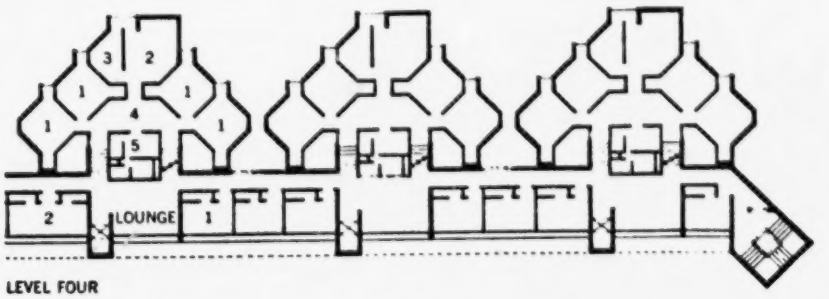
Four University-owned on-campus apartment buildings on three different campuses were studied. Individual apartment units accommodated from two to four students in single and double bedrooms. Each apartment had kitchen, bath, study and living facilities. All were new buildings having been built since 1966, and were high rise, ranging from 8 to 14 stories. They all were open to upperclassmen only; the residents were responsible for upkeep of the apartment and were subject to a minimum of university regulations.

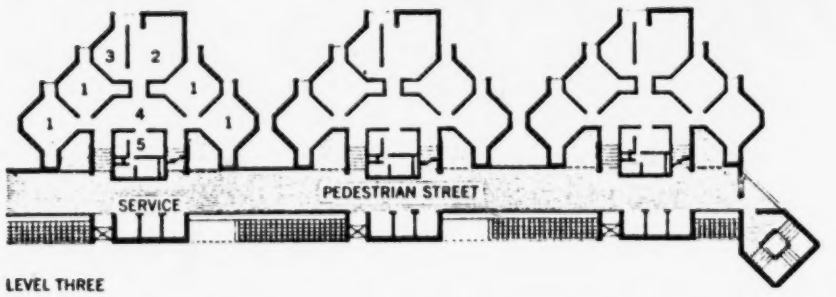
St. Olaf College Tower Dormitories, Northfield, Minnesota (Called Residence Hall Type C)

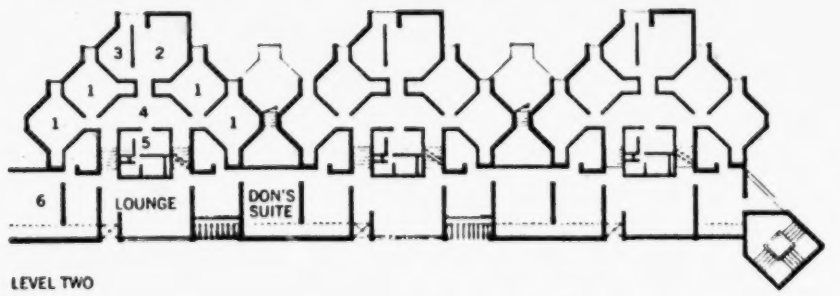
Larson and Mohn halls on the St. Olaf campus are two high rise residence halls of a somewhat unique architectural design. One is a twelve story hall for 292 women and the other a ten story hall for 296 men. The non-rectangular and varied shape of the two man study bedrooms is the unusual aspect of these buildings. Each of the 12-15 double rooms on a floor is a different shape. The study-bedrooms are large, averaging a net 230 sq./ft. There is one central washroom, laundry room and sound insulated study on each floor.

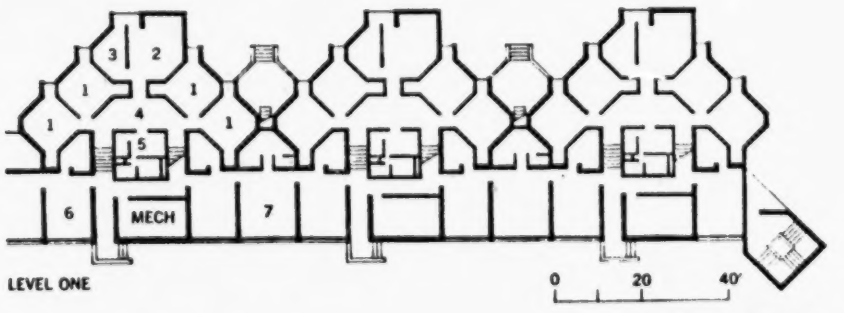








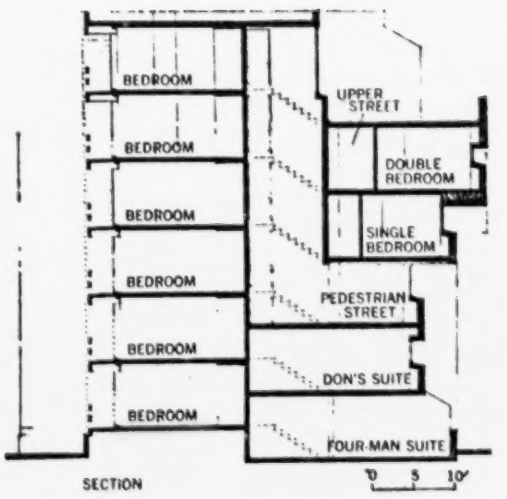




1 SINGLE BEDROOM
2 DOUBLE BEDROOM
3 DOUBLE STUDY
4 LANDING
5 WASHROOM
6 TWO-MAN SUITE
7 FOUR-MAN SUITE

The University of Guelph

Housing Complex B



The grid-shaped dormitory section of the complex is formed of two structurally independent units: the six-story "houses" of structural tile which contain most of the living units (left in photo and section), and a four-story reinforced concrete structure containing the horizontal circulation system, supporting facilities, and some living units (right). The floors of the two parts are offset a half-level from each other and joined together by staircases.

The first four levels of each "house" are identical in plan: four single bedrooms (1 and photo at far left, bottom) and a double bedroom-study (2 and 3) are grouped around a landing (4) and washroom (5). The double unit is eliminated on the fifth and sixth levels. The adjoining structure opposite the houses varies considerably from floor to floor: lounges (far left, top) connect with the second, fourth, and fifth levels; service rooms for group activities (top, near left) with the third level; and two-man suites (bottom, near left) with the first and second levels.

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Suites (Called Residence Hall Type D)

Two types of suite arrangements from three residence halls on two campuses were included in the study. A suite was defined as a small cluster of sleep-study rooms sharing a joint use facility. In one case, the suite was four rooms accommodating six students around a common bath facility. In the other, it was eight students in four sleep-study rooms around a common bath and small lounge area. The three buildings were new (built since 1966) and were no more than three stories high.

Conventional Dorms (Called Residence Hall Type E)

Included in the sample were seventeen conventional dormitories from seven different campuses. To be classified as conventional, the dorm must have long, straight central corridors with single and double sleep-study rooms opening directly off each side. The building envelope was essentially rectangular and unvaried. The population of the individual dorms ranged from 72 to 488 and they all were open to students from each year in school. Some were open to men only, some to women only and one was coeducational. The year of construction of the individual dorms ranged from 1937 to 1966.

Architectural Variables

The micro-aspects of residence hall design we measured were those independent, discrete characteristics, such as quiet and comfort control. First we asked the respondent to draw a picture of his quarters. The sketch was a free-hand, plan-view including the positions of beds, desks, shelves, doors, closets, dressers and so forth. Estimates of the room dimensions were included. Next, he was asked to describe his quarters as he would describe them to "...a close friend...who had never seen his quarters, [but] was thinking about moving into a room or rooms identical to [it]".

We then selected twenty-five variables out of the almost infinite range of micro-aspects that we could have studied, on the basis of one and/or the other of two criteria: either the variable was an important practical factor in the architect's design, or from the interviewing and observation of the previous phase of the study, we had learned that the variable was probably a significant factor in the students' satisfaction. The twenty-five variables we came up with were hominess, privacy, storage space, size, flexibility, quietness, suitability for studying, suitability for sleeping, individuality, sociability, lighting, book storage space, windows, desk top space, seclusion, suitability for relaxation, modern-ness, aesthetic appeal, effort required for cleaning, adequacy of cooling and heating, freedom to alter appearance of room, opportunity to develop friends, comfort control, academic influence, bathroom facilities, and ventilation.

We measured the micro-variables in two ways as perceived by the student. First we asked him to rate the extent to which his quarters had the quality or characteristic or architectural feature present. He was

given a five-unit scale from minimum to maximum, on which to indicate his subjective evaluation of what was available to him. Immediately thereafter, we asked him to indicate, on the same five-unit scale, how much of the same characteristics he thought his quarters should have. This permitted us to measure the difference between what the student had and what he felt he should have had. This difference told us how satisfied he was with that aspect of his quarters.

To measure the student's overall satisfaction with his living environment we created a satisfaction index based on the responses to four questionnaire items concerning general feelings about the residence hall. Students were divided into three groups on the basis of their responses: high satisfaction, medium satisfaction and low satisfaction. These groups, of course, are only relative. Low satisfaction students are not necessarily desperate to get out. The index provides us with a simple divider. We are relatively sure that, most of the time, high satisfaction students like the place they live in better than do low satisfaction students.

To be categorized a "high satisfaction" student, the student had to indicate:

1. that he was "very satisfied" with his quarters in his residence hall (question 24, answer 1)

2. that he thought his residence hall was "well designed" (question 25A, answer "yes" to "well designed")

3. that living in his present residence hall was more desirable than living in an apartment, a fraternity or sorority, a rooming house, or another residence hall (question 18, rank "1" to item "d")

4. that he was usually a little proud of his quarters when friends and or relatives came to visit him (question 25a-i, answer "agree").

If a student answered all four of these questions in the ways described above he was put in the high satisfaction group.

The "medium satisfaction" students failed to be so consistent in their praise of the environment, but at the same time, they did not indicate negative feelings about it. Students were included in the medium satisfaction category, if they were very satisfied with their environment (question 24, answer 1), but did not go on to complete the requirements of being highly satisfied; or if the student did not choose to use any of the critical or negative responses to any of the above four questions (for example, checking "no" to well-designed").

"Low satisfaction" students replied negatively to at least one of the four index questions. They indicated that they were "somewhat" or "very" dissatisfied with their quarters, they indicated that their hall was not "well designed", they ranked their hall low in comparison with other places to live, or they were not proud of their quarters.

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Several items in the qeustionnaire dealt with the extraneous variables we wanted to control. We asked how much the student personally contributed to the cost of his room and board, where he had lived for the previous two academic years, his age, his family's income, whether he had a part-time job, his academic level, his major field of study, and several other items. Satisfaction with each of these variables were compared with overall satisfaction to determine any possible relationships.

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RESULTS AND CONCLUSIONS

The results indicated that majority of the students from all of the housing types registered at least some complaint about almost all of the variables that we supplied in the questionnaire. Students estimated the amount of each quality, say "quiet", for example, that they would like to have, and then the amount they actually felt that they had. Discrepancies ranged from one point to four points for each of the items that we scaled. Chart A is a profile of the proportion of students complaining about residence hall factors. Within each residence hall type we collapsed the range of discrepancies into one group: those who expressed any dissatisfaction at all.

These complaints carry implications for the decisions that a designer will make in coming up with a new college residence hall. A heroic effort to cut noise may lead the designer to incorporate low ceilings, carpeting, acoustical tiles, small social modules, or any of a number of architectural devices. Complaints about size may move him to provide bigger rooms, just as complaints about privacy may suggest the importance of single quarters. The problem, of course, is that such decisions are locked into the economy of scarce resources. The designer, in most cases, must sacrifice something for something else. Therefore, we were especially interested in determining the relative importance of these variables. That is, how do these variables (qualities of the environment) relate to overall student satisfaction with their living environment, and are some variables more important to student satisfaction than others? Are gripes, in fact, valid indicators of student satisfaction?

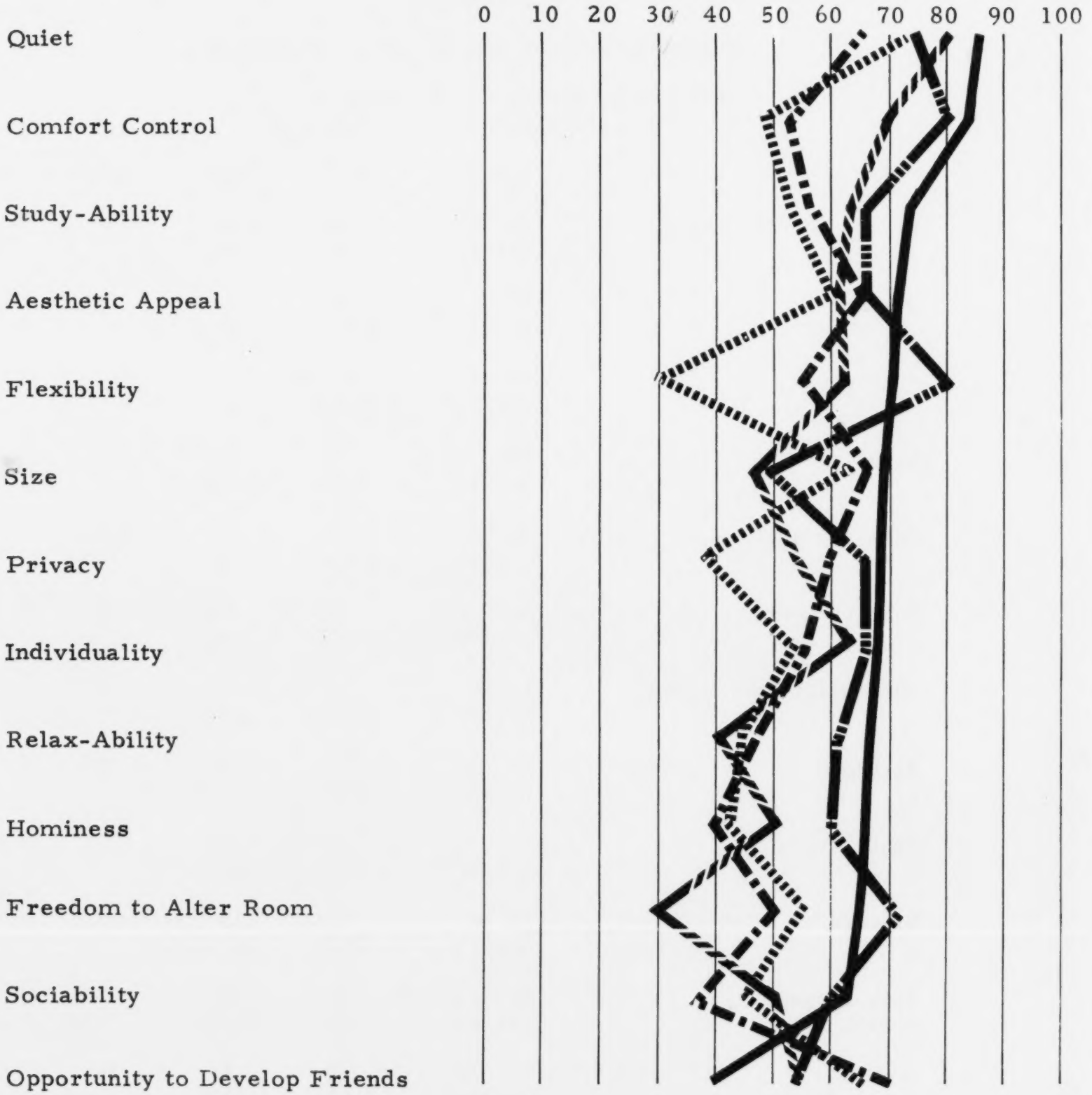
By measuring overall satisfaction independently for comparison with satisfaction with the individual variables, we could test the validity of common complaints and determine if a set of priorities could be established. In this way, we could compare satisfaction with any variable to overall satisfaction and determine if any relationship existed.

If satisfaction or dissatisfaction with a variable does not affect overall satisfaction, then, while complaints about this variable may be a vehicle by which the failure of the environment is communicated, we judge it to be not really the source of discontent.

Table A illustrates the relationship of low satisfaction, medium satisfaction and high satisfaction with each variable to overall satisfaction. To test the relative strength of the relationship between satisfaction with a variable and overall satisfaction, we subtracted the percentage of students who were very dissatisfied with the variable but highly satisfied with the overall environment. The difference between the percentage of students who are dissatisfied with a variable and those who are highly satisfied with it is the strength of the relationship of this variable to overall student satisfaction. We called this measure the association between two variables "e". As "e" approaches 100 percentage points, the relationship between the two variables approaches unity.

CHART A

PROPORTION OF STUDENTS COMPLAINING ABOUT ARCHITECTURAL FACTORS BY RESIDENCE HALL TYPE



Residence Hall Type A - Guelph
Residence Hall Type B - Apartments
Residence Hall Type C - St. Olaf
Residence Hall Type D - Suites
Residence Hall Type E - Conventional

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TABLE A

THE PERCENTAGE OF HIGHLY SATISFIED STUDENTS

Grouped According to Low, Medium or High
Satisfaction With Each Variable

	Low	Medium	High	"e's"
Effort to tidy/clean	%= 6 n=(54)	22 (348)	24 (547)	18
Freedom	%= 3 n=(123)	18 (386)	32 (428)	29
Seclusion	%= 7 n=(72)	15 (319)	29 (535)	22
Lighting	%= 14 n=(229)	24 (425)	26 (282)	12
Desk-top space	%= 8 n=(50)	17 (302)	26 (572)	18
Comfort Contr.	%= 7 n=(209)	21 (457)	36 (266)	29
Suitability for sleep	%= 14 n=(35)	13 (264)	27 (630)	13
Bathroom	%= 5 n=(87)	18 (302)	28 (548)	23
Ventilation	%= 7 n=(116)	17 (230)	30 (478)	23
Windows	%= 8 n=(91)	20 (265)	26 (547)	18
Book storage B.S.D.	%= 5 n=(178)	20 (336)	32 (411)	27
Academic ACA influence	%= 8 n=(134)	19 (482)	32 (303)	24

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	Low	Medium	High	"e's"
Privacy	%= 3 n=(128)	20 (424)	31 (374)	28
Hominess	%= 2 n=(92)	16 (404)	32 (428)	30
Storage space	%= 8 n=(132)	20 (405)	30 (384)	22
Flexibility	%= 8 n=(171)	19 (411)	33 (348)	25
Size	%= 4 n=(120)	18 (459)	34 (350)	30
Quiet	%= 9 n=(212)	23 (510)	34 (203)	30
Suitability for study	%= 7 n=(137)	20 (472)	30 (319)	23
Individuality	%= 8 n=(133)	17 (427)	33 (356)	25
Sociability	%= 7 n= (97)	18 (358)	30 (453)	23
Modern-ness	%= 2 n= (60)	14 (312)	29 (568)	27
Aesthetic appeal	%= 4 n=(153)	20 (459)	34 (311)	30
Opportunity to develop friends	%= 20 n= (82)	22 (378)	23 (462)	3
Suitability for relaxation	%= 6 n= (62)	12 (430)	35 (427)	29

If an individual variable has a strong effect on student satisfaction, we would expect a greater percentage of students who were satisfied with a variable to have high overall satisfaction than students who complained about this variable. For example, 36 percent of the students who were highly satisfied with comfort control were highly satisfied overall, whereas 7 percent of the students who were dissatisfied with comfort control were highly satisfied overall. This is an "e" of 29. (See Chart A)

The "e's" ranged from 3 to 30, but most were close to the median 23. From this data a hierarchy of complaints could not be established. Because of the limited range of differences, none of the variables stood out as being most important to student satisfaction. The "e's" were not large enough to give us a very clear picture of the effect of these variables on student satisfaction.

We next looked at the data to determine the proportion of students who were highly satisfied, moderately satisfied and dissatisfied within each residence hall type, as shown in Table B.

TABLE B: STUDENT SATISFACTION BY RESIDENCE HALL TYPE

Residence Hall Types	Satisfaction Level			Total
	High	Medium	Low	
Residence Hall Type A (Guelph)	48%	38	13	99% (N=112)
Residence Hall Type B (Apartment)	33%	56	11	100% (N=141)
Residence Hall Type C (St. Olaf)	28%	34	38	100% (N= 96)
Residence Hall Type D (Suites)	26%	48	26	100% (N=167)
Residence Hall Type E (Conventional)	9%	42	48	99% (N=407)

The proportion of highly satisfied students by residence hall type varies as follows:

Residence hall type A (Geulph) contained the highest percentage of highly satisfied students (48 percent). This hall was very unconventional in its image as perceived by its Canadian student occupants. Residence hall type B (apartments) was perceived as highly satisfying by 33 percent of its residents, a difference of 15 percent. Residence hall type C (St. Olaf) which has some unique architectural features, but was recognizably a standard "dorm" in most other respects, was highly satisfying to 28 percent of its residents, a difference of 7 percent from Type B and 20 percent from Type A. Residence hall type D (suites) was highly satisfying to 26 percent of the student residents. This is a difference of only 2 percent from Type C, but a difference of 7 percent from Type B and 22 percent from Type A. Conventional dorms, Type E, had by far the lowest percentage of highly satisfied students - 9 percent. That is a difference of 17 percent from residence hall Type D, 19 percent from Type C, 24 percent from Type B and 39 percent from Type A.

The difference in overall student satisfaction between residence hall types is quite large. We then had to determine if this difference in overall satisfaction was due to the effect of the environmental variables we were measuring. Residence hall types did differ in terms of how much each variable was complained about. In conventional dorms, 85 percent of those questioned complained about quiet, which led the list. Two-thirds or more complained about size, privacy, individuality, aesthetic appeal, flexibility, comfort control and study-ability. On only one dimension did conventional dorms come off well: the opportunity to develop many new friendships. Almost 70 percent of the residents of apartments complained about this factor. It led the list of apartment complaints; then came size, quiet, aesthetics, privacy, flexibility, individuality and study-ability and comfort control. In suites, quiet once again led the list, followed by comfort control, study-ability, individuality, opportunity for friends, privacy and aesthetics. The same kinds of permutations could be observed in the complaint lists for St. Olaf and Guelph. Quiet turned out to be the only consistently high variable: its rank never dropped below third, regardless of the residence hall type. (See Chart B).

If a complaint is common among residence hall occupants, then one would expect that a student within a residence hall who did not voice that complaint would be more satisfied than students who indicated that they were dissatisfied in this respect. Let us look, then at the increase in highly satisfied residents when we consider those who are satisfied with a quality of their environment. (See Chart C.)

The increase in the percentage of students who are highly satisfied overall indicates the strength of the relationship between satisfaction with an individual variable and overall satisfaction.

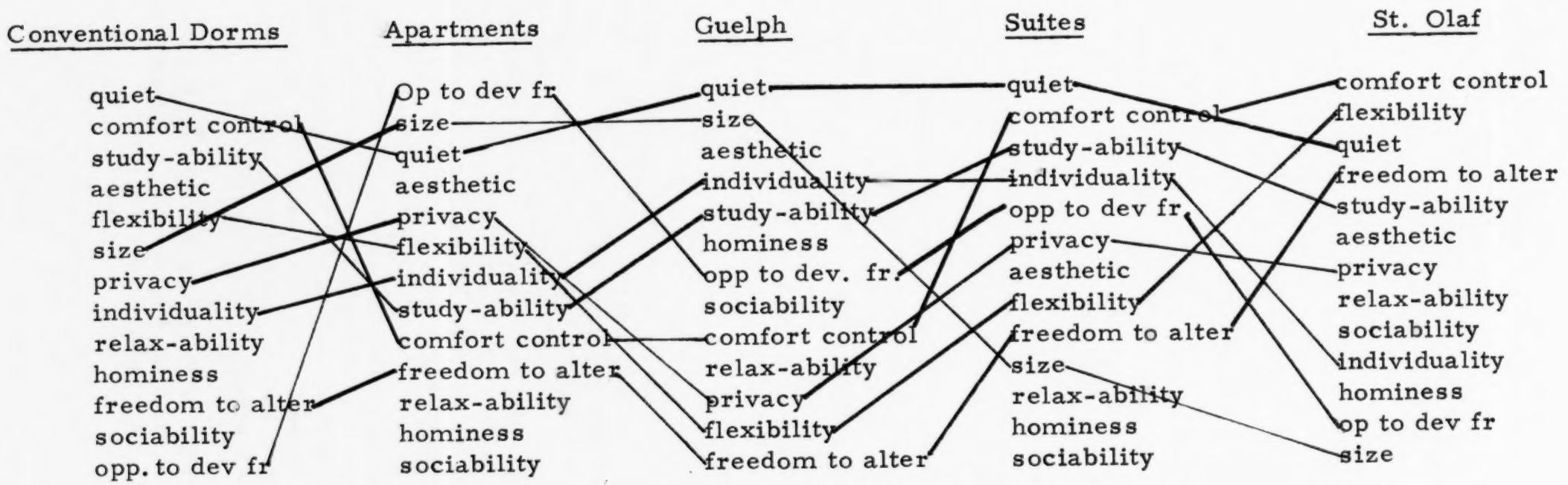

CHART B: RANKING OF COMPLAINTS BY RESIDENCE HALL

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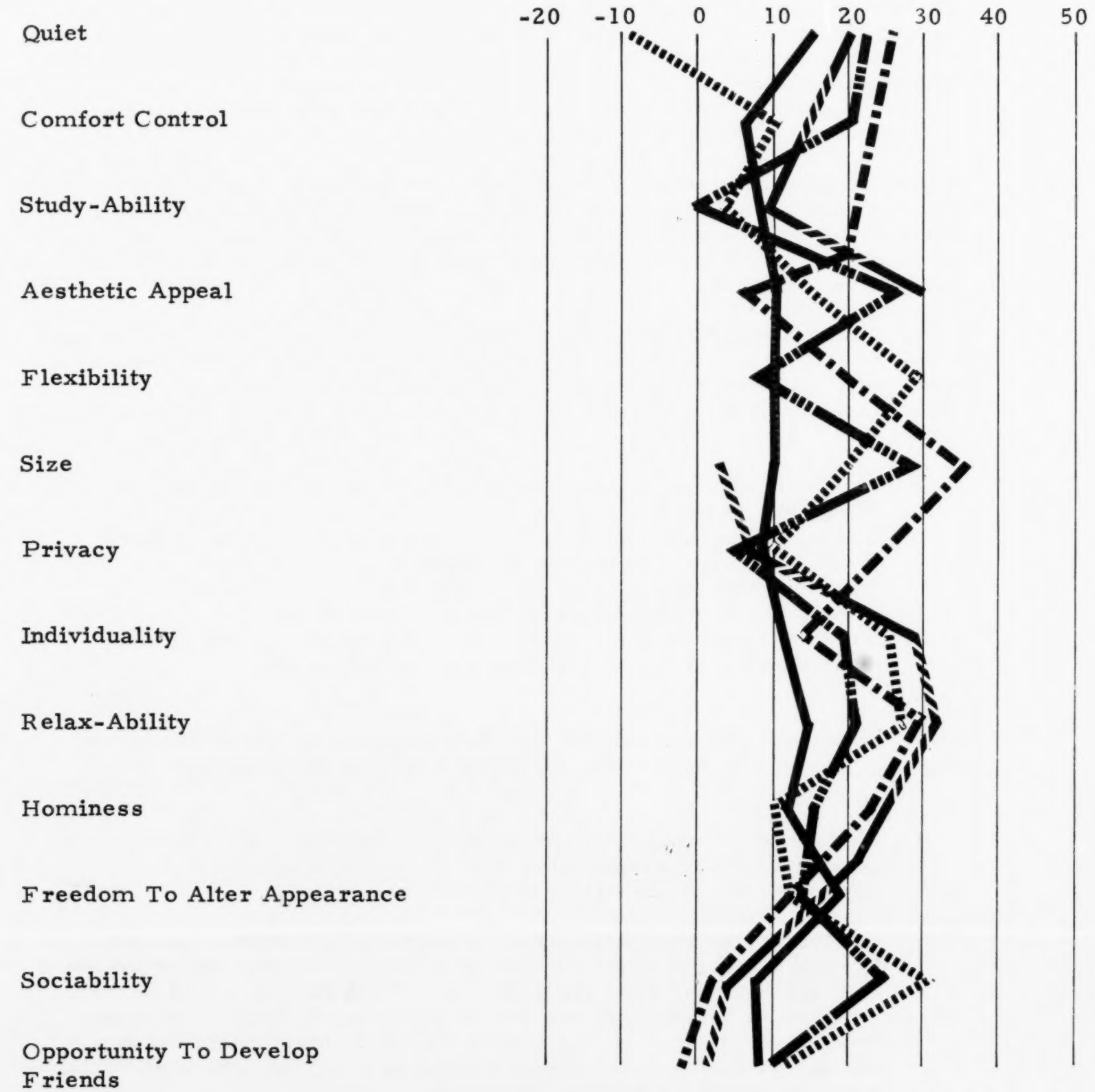
CHART C



C: INCREASE IN PERCENTAGE OF HIGHLY SATISFIED STUDENTS AMONG THOSE WHO ARE SATISFIED WITH A VARIABLE (e's)

Guelph
Apartments
St. Olaf
Suites
Conventional

Chart C indicates that in four of the dorm types satisfaction with quiet is associated with an increase of from 12 to 24 percent in the proportion of highly satisfied students. At Guelph, however, being satisfied with the "quiet" causes a drop in satisfaction of approximately 10 percent. This is especially curious because quiet was the most frequently complained about characteristic at Guelph.

A similar problem occurs with respect to the variable "opportunity to develop many friendships." In apartments this was the most frequently cited complaint; almost seven of ten residents indicated it. Yet satisfaction or dissatisfaction with this variable did not affect general satisfaction.

These findings suggest some rather interesting hypotheses. First of all, quiet at Guelph and "friends" in apartment dorms appear to be phantom variables. Most students complain about them, but they did not appear to affect satisfaction. We might posit the existence of four variables.

1. Variables that students think are important and demonstrate a strong relationship to satisfaction.
2. Variables that students think are important, but do not demonstrate a strong relationship to satisfaction.
3. Variables that students do not think are important, yet demonstrate a strong relationship to satisfaction.
4. Variables that students do not think are important and do not demonstrate a strong relationship to satisfaction.

There is no hard and fast method for operationalizing the terms in the above typology. We submit the following possible definitions:

1. Let "variables that students think are important" be taken to mean variables that more than half of the students in a particular residence hall type complained about.

2. Let "variables that demonstrate a strong relationship" be taken to mean variables that produced an effect on student satisfaction that was stronger than the median variables effect. That is, a variable is "strong" if the dot it produced on Chart C is among the right-most dots on the chart. An e=18 cutoff point becomes the operational point; approximately half of the dorm type variables produced an effect greater than e=18.

Conventional dorms contained the highest percentage of dissatisfied students. Twelve of the thirteen variables that we scaled were complained about by more than 50 percent of the students in conventional dorms, but by our standard of a "strong" variables, none of these proved to be very

important to student satisfaction. All twelve, therefore, can be considered Class 2 variables, or variables that students complain about, but that do not bear much relationship to satisfaction.

The conclusions that can be drawn from this data are: (1) satisfaction with a particular variable did not lead to much more general satisfaction and (2) the number of people voicing a complaint about a variable is not a very good indicator of its strength. It seems that if a basic threshold of user needs is met, individual architectural features are not the determinents of overall satisfaction. Looking for misfits and asking people what they would do better next time will not necessarily yield information which would result in a residence hall that is more pleasing to its residents.

If this is the case, it might appear that the environment is not important to student satisfaction. This conclusion is not verified if we look at the effect of residence hall type on student satisfaction (Table B). The difference in student satisfaction among residence hall types is striking, especially when we compare conventional dorms with those at Guelph. The relationship of the residence hall types to overall satisfaction is not disturbed when satisfaction or dissatisfaction with individual variables is controlled. For example, students who were dissatisfied with quiet in Type A were still more highly satisfied overall than students in Type E who were dissatisfied with quiet; likewise, students who were satisfied with quiet in Type A are more satisfied than students in Type E who were satisfied with quiet.

Thus, it appears that the single best predictor of overall satisfaction is residence hall type. It appears to have a consistent effect on student satisfaction. No single variable influences overall satisfaction very much and some exert no influence at all. It seems from our study that student feelings about a residence hall come from his general image of the building, from his overall ideas about its character, mood, ethos. Specific features are acceptable objects to gripe about; the overall design and "feel" are what students actually like or dislike. Gripes about specific features, then, are quite independent of overall satisfaction.

It is possible that the apparent relationship between student satisfaction and residence hall type could be due to non-physical environmental factors or differences in the student populations of the various dorms. Suppose that some students are predisposed to like residence halls while others are not. The differences in student satisfaction we ovserved in different proportions of dorm-liking and dorm-disliking students. Likewise, some residence halls may impose unreasonalble restrictions on their student occupants. If so, the differences in student satisfaction in residence halls might be attributable to differences in the restrictiveness of residence hall rules. We built into the study a thorough investigation and analysis of non-physical environmental factors, so that we would be able to evaluate reliably the importance of the physical environment.

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One of the most frequently cited complaints about college residence halls is the number of behavioural restrictions that are imposed on their residents. It is possible that the differences in satisfaction in different residence halls are due to differences in the restrictiveness of the residence halls. Three questionnaire items can shed some light on the issue. Students were asked to indicate whether or not their hall had "far too many restrictions" (question 25A-a); elsewhere in the questionnaire, they were asked to indicate whether or not their hall was "well managed" (question 25A-n). The responses to these items are reported in Table C.

TABLE C: RESTRICTIVENESS OF THE RESIDENCE HALLS

BY RESIDENCE HALL TYPE

Residence Hall Types	my residence hall has far too many restrictions (% Yes)	my residence hall has too many restrictions (% Yes)	my residence hall is well managed (% Yes)
Res. Hall Type A (Guelph)	6	12	16
Res. Hall Type B (Apartments)	2	2	8
Res. Hall Type C (St. Olaf)	59	60	18
Res. Hall Type D (Suites)	23	30	16
Res. Hall Type E (Conventional)	27	32	21

Table C indicates the restrictions are not much of a problem in residence hall types A and B; neither are they particularly burdensome to most students in residence hall types D and E. Only in residence hall type C (St. Olaf) does a majority of the respondents complain about restrictions. The variable "well managed" does not generate significant differences among the residence halls. If restrictions were the most important determinant of student satisfaction, we might have expected that the residence halls would have lined up in the same order vis a vis restrictiveness as they did vis a vis satisfaction. They did not.

But Table C does not adequately indicate whether or not the differences among the residence halls in terms of satisfaction are in fact due to the variable of restrictiveness. To find this out, we can use the same method we devised to test the influence of individual environmental factors in overall satisfaction. If restrictiveness were to account for the differences in satisfaction that we observed in Table B, page 12, we would expect that students who saw their residence hall as having too many restrictions would be less satisfied, as a group, than students who did not see their residence hall as having too many restrictions. More importantly we would expect that

the differences among the residence halls in terms of student satisfaction would significantly diminish or disappear, once the variable of restrictiveness was controlled. If both of the above conditions are met, we could attribute the differences in satisfaction in each of the sample residence halls to the variable of restriction.

TABLE D: SATISFACTION BY RESIDENCE HALL TYPE

CONTROLLED BY ATTITUDE TOWARD RESTRICTIVENESS

Students who perceived "too many restrictions" in their residence hall				Students who did not perceive "too many restrictions"			
Residence Hall Types	High	Medium	Low	Residence Hall Types	High	Medium	Low
Res. Hall A	39%	39	23	Res. Hall A	52%	38	11
Res. Hall B	*	*	*	Res. Hall B	33%	57	10
Res. Hall C	21%	31	48	Res. Hall C	41%	38	21
Res. Hall D	16%	48	36	Res. Hall D	31%	45	24
Res. Hall E	3%	27	70	Res. Hall E	13%	48	39
Average	20%	36	44	Average	34%	45	21

*indicates fewer than 10 cases

Table D indicates that "unrestricted" students are generally more satisfied than "restricted" students. The differences among satisfaction levels among the various dorms, however, persist. "Restricted" students in residence hall type A are still more highly satisfied than "restricted" students in type E. The indication is that residence hall type remains a significant determinant of student satisfaction.

We can conclude that the association we have observed between residence hall type and satisfaction is not in fact due to restrictiveness. Restrictiveness is also associated with satisfaction, but this relationship exists independently of the relationship between residence hall type and satisfaction.

A second potential non-physical source of differential satisfaction is a consequence of our sample design. As mentioned earlier, we sampled (in most cases) a conventional dorm and an experimental residence hall on each campus. We were concerned that the relatively low satisfaction of students living in conventional dorms may have been the effect of their perception of another, "nicer", residence hall, (namely, the experimental one) on campus. That is, the differences in satisfaction between control and experimental residence halls would be more the consequence of a student's sense of relative deprivation rather than the direct consequence of design factors.

Question 13 read: "All things considered, how does your residence hall compare with others on your campus?" In conventional halls, 19 percent of those sampled indicated that "other halls are better than mine";

TABLE E: PERCENT OF STUDENTS INDICATING THAT "OTHER RESIDENCE HALLS ARE BETTER THAN MINE" BY RESIDENCE HALL TYPE

	other dorms are better...
Residence Hall Type A (Guelph)	2%
Residence Hall Type B (Apartments)	0%
Residence Hall Type C (St. Olaf)	1%
Residence Hall Type D (Suites)	5%
Residence Hall Type E (Conventional)	19%

the proportion dropped in the experimental halls. If we remove the students who felt relatively deprived from the sample, we are left with those students who feel no relative deprivation - this in a way is the equivalent of removing the "nicer" experimental residence hall from the campus. We see from this that the relationship between residence hall type and satisfaction remains as strong as it was before.

TABLE F: SATISFACTION BY RESIDENCE HALL TYPE AMONG STUDENTS WHO DID NOT FEEL RELATIVELY DEPRIVED

	Satisfaction		
	High	Medium	Low
Residence Hall A (Guelph)	49%	39%	12% (110)
Residence Hall B (Apartments)	33%	56%	11% (141)
Residence Hall C (St. Olaf)	28%	35%	37% (95)
Residence Hall D (Suites)	27%	48%	25% (159)
Residence Hall E (Conventional)	11%	47%	41% (331)

More than 80 percent of the students in conventional dorms did not feel relatively deprived (Table F). If we analytically remove the influence of "a better residence hall on campus", the proportion of highly satisfied students in conventional dorms does not greatly increase and the degree of difference among the residence hall types with respect to satisfaction does not diminish.

There are not enough cases of relative deprivation in the experimental residence halls to test the relationship between residence hall type and satisfaction among the total set of relatively deprived students. Table E and F suggest, however, that relative deprivation does not account for the differences in satisfaction in the sample residence halls.

A third source of influence on the satisfaction levels of the sampled residence halls is the possible general feeling about the quality of life in residence halls on each campus. On some campuses and among some students, living in a residence hall involves a certain stigma; on the other campuses, residence halls do not have negative connotations. We asked students to indicate whether or not "Dormies" have low status on campus (Question 25A-d). Responses indicate that this issue was not a factor affecting overall satisfaction. (See Table G)

TABLE G: SATISFACTION BY RESIDENCE HALL TYPE

CONTROLLED BY ATTITUDE TOWARD

"DORMIES" STATUS ON CAMPUS

Students who felt that dormies have low status on their campus					Students who did not feel that dormies have low status on campus				
	Satisfaction					Satisfaction			
Residence Hall Types	High	Medium	Low	(N)	Residence Hall Types	High	Medium	Low	(N)
Type A (Guelph)	46%	36	18	(11)	Type A (Guelph)	50%	37	13	(91)
Type B (Apartments)	25%	50	25	(12)	Type B (Apartments)	35%	56	9	(102)
Type C (St. Olaf)	9%	18	73	(11)	Type C (St. Olaf)	32%	35	33	(79)
Type D (Suites)	15%	60	25	(20)	Type D (Suites)	30%	42	28	(122)
Type E (Conventional)	7%	37	56	(70)	Type E (Conventional)	10%	44	46	(269)

The last non-physical variable we would like to discuss is the roommate. More than seven hundred of the respondents shared their quarters with one or more roommates. Satisfaction with ones living arrangements may be closely related to compatibility with ones roommate for these students.

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TABLE H: SATISFACTION BY RESIDENCE HALL TYPE

CONTROLLED BY COMPATIBILITY WITH ROOMMATE

AMONG STUDENTS WITH ROOMMATES

Students getting along "very well" with their roommates

Satisfaction

Residence Hall Types

	High	Medium	Low	(N)
A	60%	27%	13%	
B	36	57	7	(112)
C	29	35	37	(84)
D	29	49	22	(117)
E	8	45	47	(262)

Students getting along "not as well as I would "like" or "not very well"

Residence Hall Types

	High	Medium	Low	(N)
A	*	*	*	(3)
B	21	50	29	(24)
C	25	33	42	(12)
D	18	50	32	(22)
E	5	30	65	(60)

*Students at Guelph select double quarters and their roommate.

The disparity among the residence hall types in the left-hand table has increased to e=52; the right hand table is difficult to interpret because only three students at dorm A were unhappy with their roommate. Nonetheless, differences among the residence halls in terms of satisfaction have certainly not disappeared. Table H suggests, however, that the relationship between residence hall type and student satisfaction is stronger when the problem of roommate incompatibility is not present. It is noteworthy that the proportion of highly satisfied students in residence hall types C (St. Olaf) and E (Conventional) did not change very much as a function of roommate compatibility.

Although it is impossible to test the influence of all the non-physical environmental factors upon satisfaction, Tables B through H suggest that some of the more frequently mentioned non-physical variables do not disturb the relationship reported in Table A. Residence hall restrictions, the sense of relative deprivation, the status of dorm residents on campus, and roommate compatibility do not explain away the variation in satisfaction that we observed among the sample residence hall types.

We will consider next the possible influence of different kinds of students in sample residence halls.

As mentioned earlier, some students may be predisposed to like residence halls while others are not. Although it is reasonable to suspect the existence of a predisposition, it another matter to measure it, especially

if the data are coming from students who are already living in a residence hall. Did the student dislike residence halls before he moved in, and therefore end up dissatisfied; or did the student grow to dislike residence halls after he had lived in one for a while? In the latter case, the responsibility for the dissatisfaction lies with the residence hall environment; in the former case, the responsibility lies with the factors, whatever they may be, that predispose students to dislike residence halls.

One way to approach the problem of variable predispositions is through the student's freedom to live or not to live in an on-campus residence hall. Some students choose to live in such residence halls and others are required to live in them. Further, some of the students who are required to live in a residence hall would have elected to live in one even if they were not required. The rest, presumably, were forced to live there. There are then, three categories of freedom: students who chose to live in a residence hall; students who were required to live in a residence hall, but not against their wills; students who were forced to live in a residence hall.

Distinguishing among these students is by no means a simple matter. Among students who claim to have been required to live in a residence hall, for example, some may be making this claim retrospectively. They may have been as favorably disposed toward living in a residence hall as their "required" counterparts at the beginning of the term. Similarly, some students who were required but indicated that they would have chosen to live in a residence hall anyway may be reflecting a pleasant experience there rather than their initial feelings. In short, it is virtually impossible to distinguish between required and forced students unless the question is asked before they take residence in the hall. If a predisposition to dislike residence halls exists, however, we can control a piece of it by looking at students who were not required to live in a dorm. These students, at least, will not have discolored the potential for hindsight. These students, at least, did not have a conscious aversion to residence halls.

If positive or negative predispositions are at the root of the relationship between residence hall type and satisfaction, we would expect the differences in satisfaction among the residence halls to decrease when we look separately at students who do not have conscious negative predispositions. Table I, however, indicates that differences among dorms remained. Once students who may have had negative predispositions are removed from the sample, the satisfaction scores from the dorms did not significantly increase either.

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TABLE I: SATISFACTION BY RESIDENCE HALL TYPE AMONG STUDENTS WHO WERE NOT REQUIRED TO LIVE IN A RESIDENCE HALL

	H	M	L	(N)*
Type A (Guelph)	52%	39	9	(100)
Type B (Apartments)	34%	60	5	(119)
Type C (St. Olaf)	30%	30	40	(60)
Type D (Suites)	32%	46	22	(98)
Type E (Conventional)	10%	51	40	(134)

*The reader will notice from the n's in Table I that most of the students in dorms A, B, C and D were not required to live in a dorm. The replication of the relationship that we originally observed in Table B is primarily due to the fact that satisfaction scores among students who chose to live in conventional dorms were not higher than satisfaction scores among all of the students from conventional dorms.

Various demographic factors may constitute possible indicators of differential satisfaction due to predisposition. Table J presents the degree of satisfaction by selected background characteristics.

Table J suggests that differential satisfaction levels did not arise from the background characteristics that are listed. In other words, if differential satisfaction is due to predisposition, the predisposition is not a function of age, sex, class, income or level of self-support.

These findings indicate that non-physical environmental factors and differences in student populations in the residence hall type do not account for the differences in student satisfaction that we have observed. This tends to support our conclusion that residence hall type is the key factor influencing student satisfaction.

TABLE J: SATISFACTION BY SELECTED BACKGROUND CHARACTERISTICS

	Satisfaction Level		
	High	Medium	Low
Sex			
Males	22%	43	35
Females	23%	44	33
Age			
16, 17, 18	18%	45	37
19, 20	23%	40	37
21 and older	24%	50	26
Year in School			
Freshmen	23%	43	34
Sophomores	22%	42	36
Juniors	18%	45	37
Seniors	27%	47	26
Parents' Annual Income			
Less than $8,000	29%	47	24
$8,000 - $11,000	21%	38	41
$11,000 and up	21%	45	34
Level of Self-Support			
Approx 100%	23%	40	37
Approx 75%	21%	52	27
Approx 50%	32%	44	24
Approx 25%	23%	42	35
Approx 0%	21%	44	35

There is, however, another possible explanation for the data. It is possible that clusters of individual variables within the dorm type are affecting student satisfaction. Although no single variable strongly affected overall satisfaction, a cluster of variables within a dorm type could strongly affect overall satisfaction. Our analysis does not exclude this possibility, but there are indications that this effect would not account for the difference in student satisfaction among residence hall types if it did exist.

The ranking of the variables according to percentages of students who were dissatisfied with them did differ among the residence hall types (See Chart C). However, these differences were small in comparison to the overall difference in student satisfaction among residence hall types.

The strong difference in the percentage of students who were highly satisfied in conventional dorms (9 percent) as opposed to those living in Guelph (48 percent) would not be erased by any cluster of variables because there was very little with which students living in traditional dorms were satisfied.

In all, approximately 3000 tables from the data were analyzed. Throughout, the same general pattern appeared. Overall satisfaction was strongly correlated with residence hall type, poorly correlated with specific architectural features, and little affected by the potential intervening variables.

IMPLICATIONS AND DIRECTIONS

If it is true, as our results indicate, that "residence hall type" is the essential factor in students' satisfaction with their physical living environment, then it may be not the aggregation of specific physical characteristics, but rather the whole complex system of symbols and cues which form ones impression or image of the built residence hall that is directly related to satisfaction or dissatisfaction.

It appears that the conventional "dorm" image has a negative symbolic value for most students. If this negative symbolism can be disrupted by changing the image or impression held by the students, satisfaction is increased.

If increasing satisfaction with an environment is not a problem of allocating building resources according to a set of known and weighed variables, but rather involves understanding the way a building is perceived symbolically by its potential users, how can the architect approach this problem? We suggest that the architect must consider the symbolic value of a building as it exists on two broad levels or planes:

1. The cultural-social context, which is the general framework implied by the building plan (Suites vs. Apartments) and scale (multiple vs. single unit dwellings). These are the cues which make it obvious to us that a structure is an office or an apartment and enables us to talk about such things in the abstract. The ways in which behavioural patterns are controlled by physical arrangement are also cues.

2. The aesthetic-cultural context, which is the environment as an art form. This is the way a building symbolizes a users' perception of himself. This kind of symbolism changes with time according to the current aesthetic and cultural value system which determines such dimensions as beautiful-ugly. In this way, a building or building style may come in and out of fashion and its desireability to users may change, causing a change in satisfaction. Whether or not a building is perceived as appropriate to time and place may be important to user satisfaction.

The second level is the important one to consider here, because it affects residence hall image and, thus, student satisfaction. The residence halls at Guelph and St. Olaf are both unconventional architecturally in some respects, yet Guelph's Complex B had a higher percentage of highly satisfied students (48 percent) than the towers at St. Olaf (28 percent). The crucial difference seems to be that residence halls at Guelph are unconventional in mood and style, aspects related to aesthetics, while those at St. Olaf are uncon-

ventional in form, but not aesthetically. They are, therefore, still perceived as "dorms" in the traditional sense.

The role of aesthetics in affecting satisfaction is in the way in which it breaks up negative conventional cues. At Guelph the negative conventional cues are not sent out because aesthetically, Complex B is different. Thus, we can conclude that if a building type symbolizes something negative, as a conventional dorm seems to, then a building whose aesthetic nature breaks up this negative symbolism is more satisfying to its users.

We hypothesize from our study that the way to design a residence hall that will satisfy many students today is to create an environment avoiding a regimented, institutional, "dormitory" image. The architect should strive instead to give the students the feeling that they are able to be "themselves", to be individuals, to be free from an inhibiting sense of regimentation and molding. If the architect can achieve this intangible feeling, then the students will not be put off even if they feel the buildings, and their own quarters, have many specific design or construction faults.

Complaints about specific physical features of student housing appear to be part of the gestalt of residence hall living. Dissatisfactions of this type cannot be treated as the basis for a cost/benefit calculation. If an architect apportions the inevitably limited budget for a residence hall, for instance, in such a way that he budgets relatively more construction funds to correct the problems students complain about most loudly, and less for other aspects of the building, his efforts may have little or no effect on overall student satisfaction. Once he has provided basic "threshold value" requirements, so that the building is reasonably functional, he may well be using his budget unwisely. Indeed, the experience of our study suggests that if an attempt to satisfy student complaints leads him away from design direction proposed above, his efforts may actually be self-defeating.

Our data does not prove the new hypothesis, but the hypothesis provides a workable explanation for the data. We also were not able to prove a related hypothesis...that there is no one best or ideal housing type that will please most students...rather, our data is better explained by the hypothesis that students come with a wide range of housing needs, and that a range of housing types on campus will satisfy more students than any one type, however ideal that type may appear to be.

Quite apart from the architectural ramifications of this study, there appear to be some exciting implications for the student personnel staff in college and university residence halls. It is typically difficult to avoid becoming trapped by problem-solving in residence halls, particularly when the problems are voiced loudly and frequently. Responding to complaints bout physical aspects of the residence or about supervisorial and regulatory practices of staff and program is probably not productive; it certainly is not particularly creative.

These findings are particularly striking because we set out to test and define an old paradigm, not to develop a new hypothesis. Our research plan, and our survey instrument, could, therefore, only take us a limited way into the understanding of our new hypothesis, and into the establishment of a new paradigm. Further research is needed to build on our findings in this present study. A separate TEAG research project now in the field at Washington State University is intended to provide some further clarification of the new hypotheses.

These findings do suggest, however, the need for the use of behavioural science in an architectural context. The previous approach, which consisted of asking people in their present environment what they would do better next time, is a useful way of identifying gripes, but it is not relevant to studying symbolic context and requirements. The behavioural scientist has techniques for studying human perception and behaviour which are much more effective than relying on the responses of a sample of individuals who are asked to voice their likes and dislikes.

The combination of architecture and behavioural science allows architectural forms to respond to behaviour. In this way, the architect is able to control the environmental factors which affect human behaviour and, therefore, can more accurately satisfy user needs. The behavioural scientist can help the architect to understand the phychological and sociological meaning of what he builds for the people who will use it.

APPENDIX A

UNIVERSITY OF CALIFORNIA, SAN DIEGO

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

LA JOLLA, CALIFORNIA 92037

Did you ever wish that somebody would ask students what they think about student housing?

This booklet contains a questionnaire which we think will be of interest to you. We at the San Diego campus of the University of California are doing a one-of-a-kind study of dormitories and residence halls to learn what it will take to design better places for students to live. We know that some residence halls are fairly good places to live, but most are merely adequate, and we think your opinions will be helpful to us.

Please do not put your name anywhere in the booklet. Your responses are supposed to be candid and honest, which means that we must keep everything you say completely confidential. Take the time you need to answer all of the questions, but please mail the booklet back to us before the 15th of this month.

The number on the front of the questionnaire is a control number which lets us know when your booklet is returned. Receiving your copy of the questionnaire is very important to us because the dicta of sampling theory do not allow us to find a substitute or replacement for you. Every questionnaire not returned weakens the total value of the study, thereby making it necessary for us to incur the expense of mailing a follow-up letter and possibly another questionnaire.

To return the questionnaire, fold the flap of the back cover over this letter, moisten the gummed edge and drop the questionnaire into the mail. Postage has been pre-paid.

I sincerely hope that filling out the questionnaire will be interesting for you. Thank you in advance for your time and effort. We look forward to your response.

Sincerely,

Mary C. Avery

Mary C. Avery
Project Director
Residence Hall Design Study

RESIDENCE HALL SURVEY

General Instructions: Use either pen or pencil to complete the questionnaire. Most questions can be answered by putting an X in the box next to or below the answer category. For example:

Do you live in a University-owned residence hall?

1 ☒ Yes
2 ☐ No

Please read all the instructions in the questionnaire carefully. Unless other instructions are given, check only one answer box in each part of a question.

Please disregard the numbers adjacent to the answer boxes; these are for the use of tabulating machine operators.

Note: By "your quarters" we mean the single room or set of rooms for which you (and your roommates, if any) have a private key.

PART I:

In the first part of this questionnaire, we would like to know a little about you, your college or university, and your living arrangements or quarters.

1. First, what is the name of your college or university?

_____

2. What is the name of your residence hall or dormitory?

_____

3. What is your present academic status?

1 ☐ Freshman
2 ☐ Sophomore
3 ☐ Junior
4 ☐ Senior
5 ☐ Graduate Student
6 ☐ Other (Please explain)_____

4. What is your major field of study? If you have not selected a major, please indicate the field in which you feel you will probably major.

_____

5. Do you share your quarters or do you have single quarters?

1 ☐ single quarters
2 ☐ have one roommate
3 ☐ have two roommates
4 ☐ have three roommates
5 ☐ have four or more roommates

IF YOU HAVE A ROOMMATE OR ROOMMATES:

5a. Generally speaking, how do you get along with your roommate or roommates?

1 ☐ very well
2 ☐ not as well as I would like
3 ☐ not very well

6. On the whole, would you rather have single quarters or do you prefer to have a roommate(s)?

1 ☐ rather have single quarters
2 ☐ rather have (a) roommate(s)
3 ☐ don't know, it depends on the roommate(s)
4 ☐ no difference between single quarters or quarters with (a) roommate(s)
5 ☐ other (please explain)_____

7. Does your college or university require that you live in a college residence hall or are you living in the hall because you wanted to?

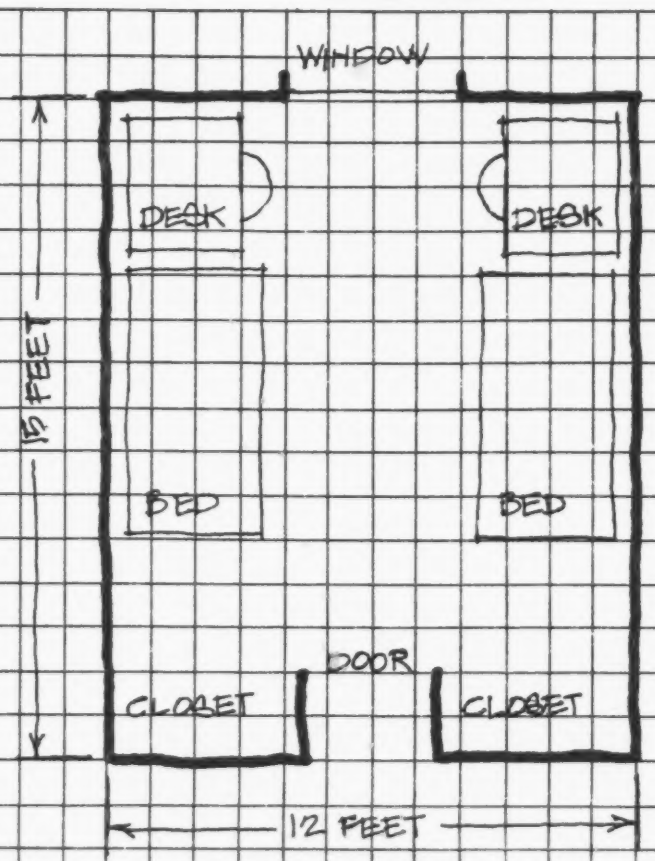
1 ☐ I am required to live in a residence hall this year, but I would have chosen not to.
2 ☐ I am required to live in a residence hall this year, but I would have chosen to live in a residence hall even if I were not required to do so.
3 ☐ I am not required to live in a residence hall.
4 ☐ Other (please explain)_____

8. Next, we would like to know something about the housing situation around your school. What is the supply of adequate housing facilities in the area around your school? Please indicate for each of the types of housing listed below whether it is Very Available, Somewhat Available, Somewhat Scarce, or Very Scarce in your area:

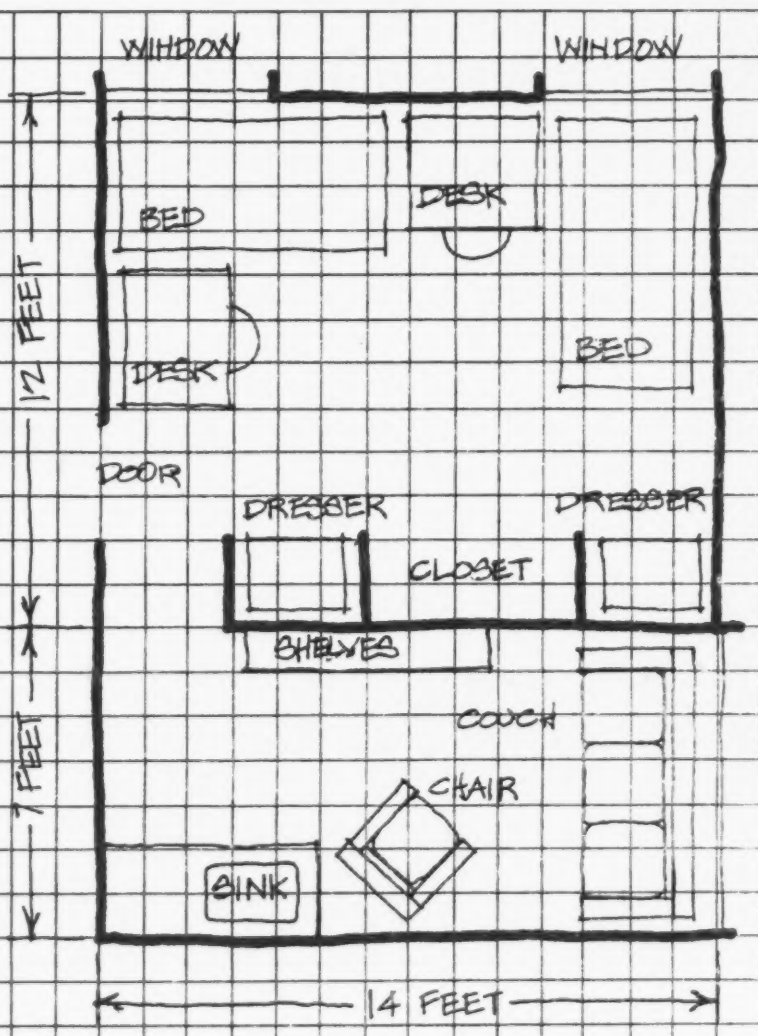
Types of Housing	Very Available	Somewhat Available	Somewhat Scarce	Very Scarce	Don't Know
Modern apartments	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Older apartments	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Single rooms in family homes	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Single rooms in boarding houses	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Fraternity or sorority dwellings	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Cooperative boarding houses	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Single rooms in motels or hotels which provide long-term housing	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Entire houses	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Residence hall rooms	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
(Other)_____	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

9. Would you please sketch your room or rooms in the blank space provided below. EXAMPLE A and EXAMPLE B are illustrations of what your sketch may look like. The sketch should be a free-hand, top-view of your quarters including the positions of beds, desks, shelves, doors, closets, dressers, and so forth. Please add a rough estimate of the length of your walls.

EXAMPLE A



EXAMPLE B



Please sketch your room(s) below:

10. Which of your furnishings are movable (not fastened or built-in)?

		Movable	Non-Movable	Not Provided
1	Bed	1 ☐	2 ☐	3 ☐
2	Desk	1 ☐	2 ☐	3 ☐
3	Dresser	1 ☐	2 ☐	3 ☐
4	Closet/Wardrobe	1 ☐	2 ☐	3 ☐
5	Bookshelf	1 ☐	2 ☐	3 ☐
6	Study Lamp	1 ☐	2 ☐	3 ☐

IF YOU HAVE ANY NON-MOVABLE FURNITURE:

10A. Do you like or dislike having non-movable furniture?

1 ☐ Like non-movable furniture
2 ☐ Dislike non-movable furniture
3 ☐ Does not matter whether furniture is movable or not movable

11. A sketch, of course, does not fully describe your quarters. Suppose a close friend of yours, who had never seen your quarters, was thinking about moving into a room or rooms identical to yours. The friend has asked you to describe your quarters. What would you write?

12. Is there another room or set of rooms in your residence hall that you would prefer to room in?

1 ☐ Yes, I would prefer another room in this residence hall.
2 ☐ No, all the rooms are identical or very similar.
3 ☐ No, my room is as good as or better than other rooms in this residence hall.

IF YOU ANSWERED "YES" TO QUESTION 12:

12a. What is better about the quarters which you would prefer?

_____

_____

_____

_____

13. All things considered, how does your residence hall compare with others on your campus?

1 ☐ My residence hall is best.
2 ☐ My residence hall is as good as, but not better than, others.
3 ☐ Other residence halls are better than mine.
4 ☐ Don't know
5 ☐ Other (please explain) _____

PART II:

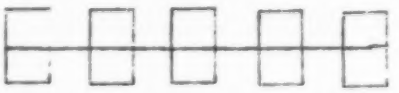
Next we would like to take a closer look at some selected characteristics of your quarters. Several characteristics of your quarters are listed below. For each characteristic, you are asked to give two ratings:

1) How good <u>are your present quarters</u> in terms of this characteristic?

2) How good <u>should your quarters be</u> in terms of this characteristic for your own satisfaction?

Each rating will be made on a five-point scale, which looks like this:

(Minimum) 1 2 3 4 5 (Maximum)

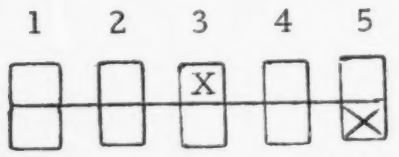


Low numbers represent low ratings and high numbers represent high ratings. If you think your quarters offer very little or none of this characteristic, you would place an X below number 1. If you think there is "just a little" you would place an X below number 2 and so on. For each scale, place an X below only one number. Please do not omit any scales.

EXAMPLE:

The privacy of my quarters. That is, the ability to be alone when I want to be alone in my quarters.

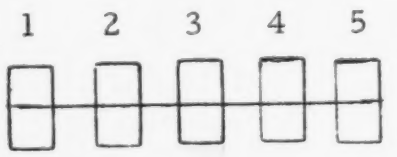
How much is there now?
How much should there be?



This answer indicates that the student's quarters provide a moderate amount of privacy, and that the student desires a very great amount.

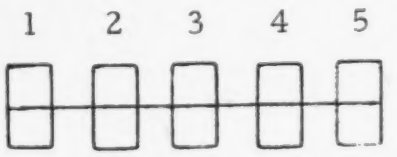
14A. The privacy of my quarters. That is, the ability to be alone when I want to be alone in my quarters.

How much is there now?
How much should there be?



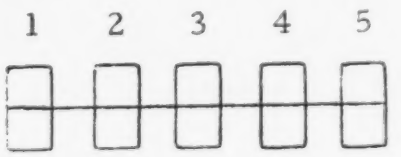
B. The hominess of my quarters.

How much is there now?
How much should there be?



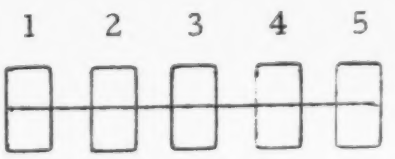
C. The amount of storage space in my quarters.

How much is there now?
How much should there be?



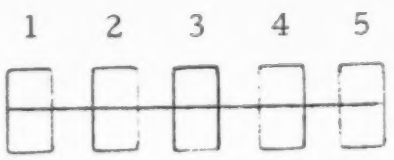
D. The flexibility of my quarters. That is, the ability to create an environment to my liking in my quarters (by rearranging furniture, changing decorations, etc.)

How much is there now?
How much should there be?



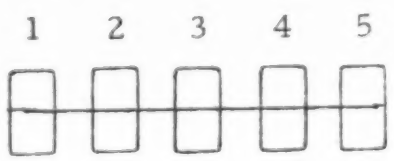
E. The size of my quarters. That is, the adequacy of the total space in my quarters.

How much is there now?
How much should there be?



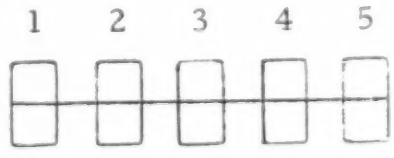
F. The quietness of my quarters. That is, the freedom from interfering noises in my quarters.

How much quietness is there now?
How much quietness should there be?



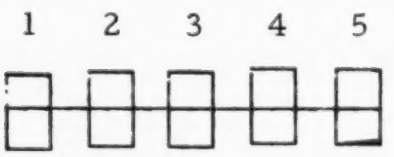
G. The suitability of my quarters for studying.

How suitable is it now?
How suitable should it be?



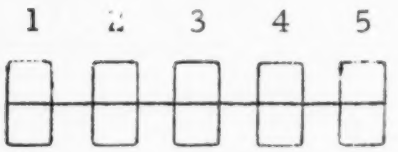
H. The individuality of my quarters.

How much individuality is there now?
How much individuality should there be?



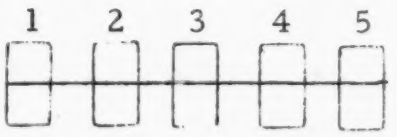
I. The adequacy of lighting in my quarters.

How much is there now?
How much should there be?



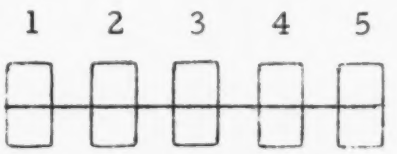
J. The sociability of my quarters. That is, provision for allowing me the company of other people in my quarters.

How much is there now?
How much should there be?



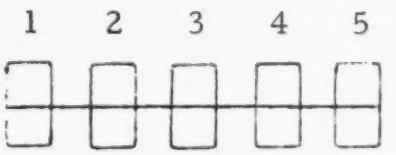
K. The suitability of my quarters for sleeping?

How suitable is it now?
How suitable should it be?



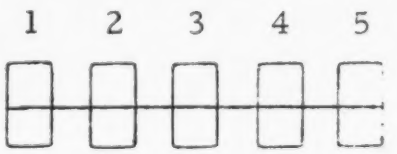
L. The amount of desk-top space in my quarters.

How much is there now?
How much should there be?



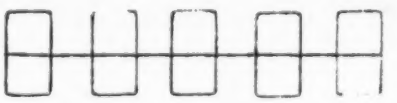
M. The seclusion of my quarters. That is, the ability for me to control access by others when I want to.

How much is there now?
How much should there be?



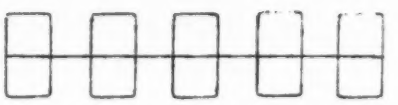
N. The adequacy of ventilation in my quarters.

How much is there now?
How much should there be?



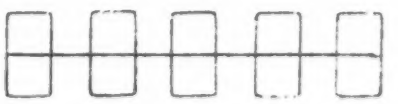
O. The suitability of my quarters for relaxation.

How suitable is it now?
How suitable should it be?



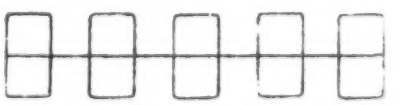
P. The modern-ness of my quarters.

How much is it now?
How much should it be?



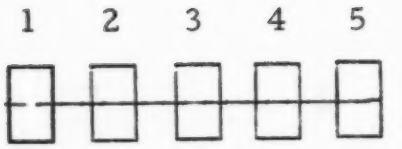
Q. The aesthetic appeal of my quarters.

How appealing is it now?
How appealing should it be?



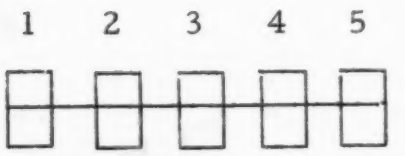
R. The effort required for tidying and cleaning my quarters.

How much effort is it now?
How much effort should it be?



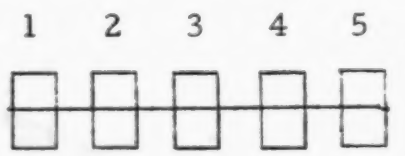
S. The adequacy of cooling or heating in my quarters.

How adequate is it now?
How adequate should it be?



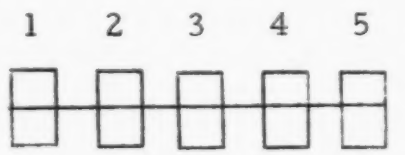
T. The freedom I have to alter the appearance of my quarters. That is, the ability to decorate to my liking.

How much is there now?
How much should there be?



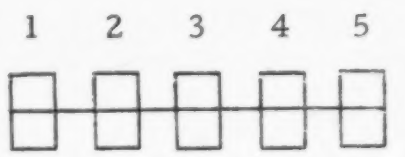
U. The opportunity to develop many friendships in my residence hall.

How much is there now?
How much should there be?



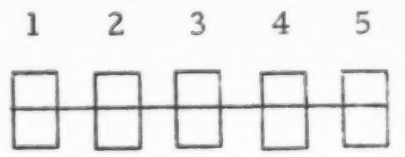
V. The comfort control I have in my quarters. That is, the ability for me to adjust light, heat, ventilation, and so forth, to my liking.

How much is there now?
How much should there be?



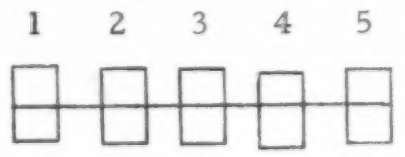
W. The academic influence of my quarters, that is, the extent to which my quarters enhance my attitude toward studying.

How much is there now?
How much should there be?



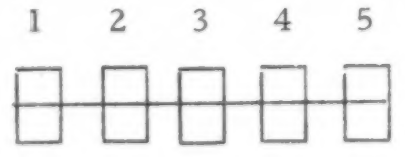
X. The adequacy of bathroom facilities provided for my quarters.

How adequate are they now?
How adequate should they be?



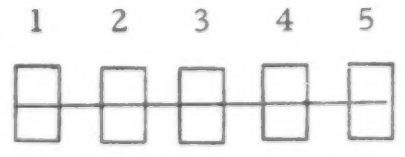
Y. The amount of book storage space in my quarters.

How much is there now?
How much should there be?



Z. The size of the windows in my quarters.

How large is it now?
How large should it be?



PART III.

In this section of the questionnaire, we would like to direct our attention to the residence hall building that you reside in.

15. Which one of the following statements applies to you?

1 ☐ I chose my residence hall and my quarters this year.
2 ☐ I chose my residence hall, but I was assigned my quarters this year.
3 ☐ I was assigned my residence hall, but I chose my quarters this year.
4 ☐ I was assigned my residence hall and my quarters this year.
5 ☐ Other (specify)_____

16. Approximately how many other university-owned and operated residence halls are there around your campus in which you could live?

1 ☐ No other halls to which I could be admitted.
2 ☐ One hall to which I could be admitted.
3 ☐ Two halls to which I could be admitted.
4 ☐ Three, four, or five halls to which I could be admitted.
5 ☐ More than five halls to which I could be admitted.

IF THERE ARE OTHER RESIDENCE HALLS TO WHICH YOU COULD BE ADMITTED:

16a. Are the other halls (or hall) rather different from your own?

1 ☐ No, all of the residence halls are very similar.
2 ☐ Yes, some of the halls are rather different.
3 ☐ Yes, every hall is very different.

17. Residence halls vary in the number of facilities they offer to the student. Some halls have a great variety of facilities. Please indicate how important the following facilities of your residence hall are to you. If your residence hall does not have the facility listed, check "Is Not Provided".

	Very Important	Somewhat Important	Not Important	Is Not Provided
a. Typing room or rooms	1 ☐	2 ☐	3 ☐	4 ☐
b. Study lounge (solely for study)	1 ☐	2 ☐	3 ☐	4 ☐
c. Residence hall library or reading room	1 ☐	2 ☐	3 ☐	4 ☐
d. A social lounge	1 ☐	2 ☐	3 ☐	4 ☐
e. A T. V. Room	1 ☐	2 ☐	3 ☐	4 ☐
f. A recreation room	1 ☐	2 ☐	3 ☐	4 ☐
g. A music practice room	1 ☐	2 ☐	3 ☐	4 ☐
h. Automatic washers & dryers	1 ☐	2 ☐	3 ☐	4 ☐
i. Kitchenette facilities	1 ☐	2 ☐	3 ☐	4 ☐
j. Dating rooms	1 ☐	2 ☐	3 ☐	4 ☐

18. Please number in rank order (1st, 2nd, ...5th) each of the following dwellings in terms of your opinion of the desirability of someone in your situation living in each:

a. _____ Living in an apartment
b. _____ Living in a fraternity or sorority
c. _____ Living in a room in a rooming house
d. _____ Living in your present residence hall
e. _____ Living in another residence hall that you are acquainted with

19. How many nights in an average school month do you stay somewhere other than in your residence hall?

1 ☐ From 0 to 3
2 ☐ From 4 to 6
3 ☐ From 7 to 9
4 ☐ From 10 to 15
5 ☐ More than 15

20. How much time and effort have you spent furnishing and outfitting your quarters?

1 ☐ A very great deal of time and effort
2 ☐ A considerable amount of time and effort
3 ☐ Some time and effort
4 ☐ Very little time and effort
5 ☐ No time and effort at all

21. To what extent should your residence hall and your quarters be designed to be an integral part of your academic experience and to what extent should your residence hall and quarters be a haven and retreat from school?

COMMENT: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

22. Listed below are a number of common advantages to living in a residence hall. Please indicate for each advantage listed whether it is very important, somewhat important, slightly important, or not at all important to you.

	Very Important	Somewhat Important	Slightly Important	Not at All Important
a. Relatively low cost	1 ☐	2 ☐	3 ☐	4 ☐
b. Closeness and convenience to campus	1 ☐	2 ☐	3 ☐	4 ☐
c. Free from responsibilities of apartment life	1 ☐	2 ☐	3 ☐	4 ☐
d. Family is less worried about you if you live in a residence hall	1 ☐	2 ☐	3 ☐	4 ☐
e. Be with other students in a similar situation	1 ☐	2 ☐	3 ☐	4 ☐
f. Meet people more easily	1 ☐	2 ☐	3 ☐	4 ☐
g. Improve my study habits	1 ☐	2 ☐	3 ☐	4 ☐
h. Eating regularly	1 ☐	2 ☐	3 ☐	4 ☐
i. Avoid being alone all the time	1 ☐	2 ☐	3 ☐	4 ☐

23. A. What, in your opinion, are the two biggest advantages of living in your residence hall?

1st _____

2nd _____

B. What, in your opinion, are the two biggest disadvantages of living in your residence hall?

1st _____

2nd _____

24. Generally speaking, how satisfied are you with your quarters in your residence hall?

1 ☐ Very satisfied
2 ☐ Somewhat satisfied
3 ☐ Somewhat dissatisfied
4 ☐ Very dissatisfied

25. Listed below are adjectives that may describe your residence hall. Please check "YES" for each adjective that describes an aspect of your hall and check "NO" if the adjective does not describe an aspect of your hall. Check "?" if you cannot decide. Please do not skip any adjectives.

A. My Residence Hall is.....

	Yes	No	?		Yes	No	?
Too big	1☐	2☐	3☐	Well designed	1☐	2☐	3☐
Unusual	1☐	2☐	3☐	Nice to come home to	1☐	2☐	3☐
Noisy	1☐	2☐	3☐	Beautiful	1☐	2☐	3☐
Ugly	1☐	2☐	3☐	Personal	1☐	2☐	3☐
Comfortable	1☐	2☐	3☐	Interesting	1☐	2☐	3☐
Lonely	1☐	2☐	3☐	Well managed	1☐	2☐	3☐
Dull	1☐	2☐	3☐	Too many restrictions	1☐	2☐	3☐
Crowded	1☐	2☐	3☐	Nice to get out of	1☐	2☐	3☐

B. My Quarters are....

	Yes	No	?		Yes	No	?
Bright	1☐	2☐	3☐	Crowded	1☐	2☐	3☐
Homey	1☐	2☐	3☐	A haven	1☐	2☐	3☐
Ugly	1☐	2☐	3☐	Nice to get out of	1☐	2☐	3☐
Confining	1☐	2☐	3☐	Typical	1☐	2☐	3☐
Comfortable	1☐	2☐	3☐	Fun	1☐	2☐	3☐
Institutional	1☐	2☐	3☐	Cell-like	1☐	2☐	3☐
Noisy	1☐	2☐	3☐	Tidy	1☐	2☐	3☐
Stuffy	1☐	2☐	3☐	Nice view	1☐	2☐	3☐
Nice to come home to	1☐	2☐	3☐	Cold	1☐	2☐	3☐
Masculine	1☐	2☐	3☐	Feminine	1☐	2☐	3☐

25a. Please indicate whether you agree or disagree with each of the following statements:

	Agree	Disagree	?
a. My residence hall has far too many restrictions	1☐	2☐	3☐
b. Dating is made easier when you live in a dorm	1☐	2☐	3☐
c. I like most of the people in my dorm	1☐	2☐	3☐
d. "Dormies" have low status on campus	1☐	2☐	3☐
e. People always seem to be loitering around me in my dorm	1☐	2☐	3☐
f. I envy friends much of thetime who are living in apartments	1☐	2☐	3☐
g. College is not as tough as I thought it would be	1☐	2☐	3☐
h. My grades probably would improve if I moved out of the residence halls	1☐	2☐	3☐
i. When friends or relatives visit me I am usually a little proud of my quarters	1☐	2☐	3☐
j. The people in my dorm have really interesting discussions	1☐	2☐	3☐
k. Most of the people living in my residence hall are pretty immature.	1☐	2☐	3☐

PART IV:

Last, we would like some statistical information.

26. Sex: 1 ☐ Male 2 ☐ Female

27. How old are you?

1 ☐ 16 or younger
2 ☐ 17 - 18
3 ☐ 19 - 20
4 ☐ 21 - 22
5 ☐ 23 - 24
6 ☐ 25 and older

28. Are you the only child of your parents, first born among others, second born, third born, fourth born, fifth born, or more?

1 ☐ Only child
2 ☐ First born among others
3 ☐ Second born
4 ☐ Third born
5 ☐ Fourth born
6 ☐ Fifth born or more

29. What is your family's approximate income?

1 ☐ Less than $5,000 per year
2 ☐ $5,000 to $8,000 per year
3 ☐ $8,000 to $11,000 per year
4 ☐ More than $11,000 per year presently

30. Do you have a part time job for which you receive pay?

1 ☐ Yes
2 ☐ No

IF YES:

30a. Approximately how many hours per week do you work?

1 ☐ 0 - 5
2 ☐ 6 - 10
3 ☐ 11 - 15
4 ☐ 16 - 20
5 ☐ 21 - 40
6 ☐ 41 or more

31. Which one of the following statements applies to you?

1 ☐ I personally have paid for (or will pay for) 100% of my room and board expenses this year.
2 ☐ I personally have paid for (or will pay for) approxin.ately 75% of my room and board expenses this year. (parents, scholarship or other sources having paid the remainder.)
3 ☐ I personally have paid for (or will pay for) approximately 50% of my room and board expenses this year. (parents, scholarship or other sources having paid the remainder.)
4 ☐ I personally have paid for (or will pay for) approximately 25% of my room and board expenses this year. (Parents, scholarship or other sources having paid the remainder.)
5 ☐ I personally have paid for (or will pay for) none of my room and board expenses this year.

32. Finally, we would like to know about your housing history. For each of the periods below (e.g., "Fall 1966", "Spring 1966", etc.) please indicate the type of housing you were living in <u>for most of that period.</u> If you were not attending a college or university during one or more of the periods, check "not in college". Please check only <u>one</u> housing type for each period.

	Fall '66 ("X" one)	Spring '66 ("X" one)	Fall '67 ("X" one)	Spring '67 ("X" one)	Fall '68 ("X" one)
Residence hall presently living in	1 ☐	1 ☐	1 ☐	1 ☐	1 ☐
Another residence hall	2 ☐	2 ☐	2 ☐	2 ☐	2 ☐
Fraternity or sorority house	3 ☐	3 ☐	3 ☐	3 ☐	3 ☐
One bedroom or studio apartment	4 ☐	4 ☐	4 ☐	4 ☐	4 ☐
Two bedroom or larger apartment	4 ☐	4 ☐	4 ☐	4 ☐	4 ☐
Single room with family residence	5 ☐	5 ☐	5 ☐	5 ☐	5 ☐
Lived at home (with your own family)	6 ☐	6 ☐	6 ☐	6 ☐	6 ☐
Cooperative boarding house	2 ☐	2 ☐	2 ☐	2 ☐	2 ☐
Rooming house	7 ☐	7 ☐	7 ☐	7 ☐	7 ☐
Room in hotel or motel	7 ☐	7 ☐	7 ☐	7 ☐	7 ☐
NOT IN COLLEGE	8 ☐	8 ☐	8 ☐	8 ☐	8 ☐
Other _____	9 ☐	9 ☐	9 ☐	9 ☐	9 ☐

Thank you very much for your time and cooperation in completing this questionnaire. If there is anything else you would like to say about your quarters, your residence hall or any of the other issues in this study, we welcome your comments in the space provided below.

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